

The Starr Model

A different model of weekly periodization described by Mark Berry in 1933 called for three training days per week and variation in workload among those days. In this model, the whole body is worked every day using many of the same exercises, but the amount of weight varies each day: a medium day, a heavy day, a light day. Various permutations of this model have been used for several decades, one of the most popular being the version presented by Bill Starr in his 1976

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book *The Strongest Shall Survive*. Starr's was a similar three-day-per week model, with the loads ordered heavy to medium to light, a slightly different application of the load/rest relationship than in the Texas method we describe earlier in this chapter. Another version was used by Dr. Mike Stone as early as 1976 and outlined in a number of his publications from the National Strength Research Laboratory at Auburn University in the early 1980s. This method uses a simple load variation among four workouts per week (rather than the three of previous incarnations). Both the Starr and Stone models call for varying the exercises between days in addition to the varying the load. Dr. Stone's model is likely the most completely researched and frequently cited periodization program in Western sports science literature. It works very well in its early three- and four-day stages for most strength and power athletes. Other coaches have adapted this program for Olympic weightlifters, adding a fifth and a sixth day as the athletes advances and adapts to an ever-increasing training load (table 7-1).

Adding a day for the purpose of increasing training volume is actually different from doing a 4-day split routine as described above, where the four days are essentially two workouts that have been divided into four. When increasing training volume from a three-day schedule, another complete day is added and the entire body is trained, as on the other 3 days, but at a different intensity.

So far, we have used the terms "heavy," "medium," and "light" very loosely, but it is most useful to consider loads as percentages of 1RM, since this is a quantifiable value for each athlete. "Light" is any load less than 70% of 1RM, "medium" is greater than 70% but less than 85% of 1RM, and "heavy" is a load greater than 85% of 1RM (table 7-2). Do not use multi-RM test values in programming with this model; the best and most

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accurate reference point is an absolute value related to maximal strength rather than a sub-maximal estimate of strength. Simple enough. More complex, though, is the correct application of this concept. Doing one set of 3 with 70% is light work and will facilitate recovery as “active rest” if used as part of a light-day workout. But what happens with 5 sets of 10 at 70%? Each trainee at the intermediate level has a specific training goal: strength, power, or mass, and each of these goals has a specific repetition range associated with it. Each range also has an associated intensity (%1RM) that is a maximal stress. For example, a trainee should be able to do three sets of 10 with about 75% of 1RM. This would be difficult; it is an intensity that is high for the repetitions. Knowing this, offload or recovery days can be planned for by reducing the intensity without changing the reps. If 3 sets of 10 reps with 70% constitutes the heavy day, offload would be 50 to 60% of 1RM for three sets of 10. But if 80% for sets of 5 is the work, 70% for sets of 10 is not offloading, and it will not facilitate recovery. It is important to understand the relationship between repetitions and intensity, how to manage that relationship correctly, and how trainees respond to it (table 7-2).

The goal of any model of weekly periodized training is to produce a disruption in homeostasis through the cumulative effects of heavy training days, and then allow supercompensation to occur with the inclusion of the light day and the rest it provides. The light day is an absolutely essential component of the program; it is a recovery day. A light training load should not be enough to induce an overload and disrupt homeostasis, and it is not really a part of the overload event. It should be light enough to allow for recovery while at the same time providing enough work through the movement pattern to prevent any loss of fitness. Failure to include the important and frequently overlooked light training day will